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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

24061.302 / 1999-0149

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on October 5, 2005

Signature

Typed or printed name

Gayle Conner

Application Number

09/755,282

Filed

January 8, 2001

First Named Inventor

Sheng-Hsiung Chen

Art Unit

2827

Examiner

Mitchell, James M.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor.

Signature

assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

Timothy F. Bliss

Typed or printed name

attorney or agent of record.

50,925

972 739-8638

Registration number \_\_\_\_\_

Telephone number

attorney or agent acting under 37 CFR 1.34.

October 5, 2005

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.



\*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Serial No.: 09/755,282

REASONS IN SUPPORT OF PRE-APPEAL  
BRIEF REQUEST FOR REVIEW

Patent / Docket No. 1999-0149/24061.302

Customer No.: 42717

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	Attorney Docket No. 24061.302
Sheng-Hsiung Chen	§	(1999-0149)
Serial No.: 09/755,282	§	Customer No. 42717
Filed: January 8, 2001	§	Group Art Unit: 2827
For: METHOD OF IMPROVING COPPER	§	Examiner: Mitchell, James M.
PAD ADHESION	§	

**REASONS IN SUPPORT OF  
PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Please consider the following reasons in support of the concurrently filed Pre-Appeal Brief Request for Review.

**Reasons**

I. Applicant submits that there is clear error with respect to the Examiner's rejection of claims 46, 48, and 49 under 35 U.S.C. § 102(b) in light of U.S. Patent No. 4,984,061 to Matsumoto ("Matsumoto"). More specifically, as detailed on page 6 of Applicant's Response to the Final Office Action, filed on June 3, 2005, the rejection of claim 46 is deficient because the prior art clearly fails to teach or suggest the element of claim 46 reciting "wherein the third metal layer surrounds and rises above each of the vertical structures." Claims 48 and 49 depend from and further limit claim 46 and therefore suffer from the same error as claim 46.

II. Applicant submits that there is clear error with respect to the Examiner's rejection of claims 34-36 and 38 under 35 U.S.C. § 103 in light of U.S. Patent No. 6,002,179 to Chan ("Chan"), U.S. Patent No. 6,448,650 to Saran et al. ("Saran"), and U.S. Patent No. 5,994,762 to Suwanai ("Suwanai"). As described in detail on pages 7 and 8 of Applicant's Response to the Final Office Action, filed on June 3, 2005, the cited combination of references fails to teach or suggest at least one element of claim 34. More specifically, the Office action relies on the references to describe only "a metal barrier ... covering the passivation layer and conforming to a shape separated by openings in said passivating layer." (Final Office action, dated April 5, 2005, at pgs. 3-4). While it is unclear whether the "metal barrier" is being used to render obvious the barrier layer or the conducting pad of claim 34, Chan describes only the single layer (32 for Fig. 3; 72 for Fig. 7; and 92 for Fig. 9) and fails to teach or suggest both a barrier layer and a conducting pad as recited in claim 34. Claims 35, 36, and 38 depend from and further limit claim 34 and therefore suffer from the same error as claim 34.

III. Applicant submits that there is clear error with respect to the Examiner's rejection of claims 40, 41, 43, 44, and 45 under 35 U.S.C. § 103 in light of Chan, Saran, and Suwanai. As described in detail on pages 8 and 9 of Applicant's Response to the Final Office Action, filed on June 3, 2005, the cited combination of references fails to teach or suggest at least one element of claim 40. More specifically, with respect to claim 40, the Office action contains the same error as described above in section II. (See Final Office action, dated April 5, 2005, at pgs. 3-4). Furthermore, the combination of references cited in the Final Office action, dated April 5, 2005, at pgs. 3-4, clearly fail to teach or suggest the elements of claim 40 where a "metal barrier layer conforms to a shape provided by the island structures and does not completely fill the spaces between the island structures; and a metal pad layer covering the metal barrier layer, wherein the metal pad layer fills the spaces between the island structures not filled by the metal barrier layer and rises above the island structures." Claims 41, 43, 44, and 45 depend from and further limit claim 40 and therefore suffer from the same error as claim 40.

Serial No.: 09/755,282

Patent / Docket No. 1999-0149/24061.302

REASONS IN SUPPORT OF PRE-APPEAL  
BRIEF REQUEST FOR REVIEW

Customer No.: 42717

**Conclusion**

It is respectfully submitted that all the claims in the application are in condition for allowance.

Respectfully submitted,

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Dated: October 5, 2005  
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R-117882

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*Gayle Conner*

Gayle Conner